

WHAT IS CLAIMED IS:

1. A stent graft for insertion into a body vessel of a patient, said stent graft comprising:
 - 5 a. a hollow substantially cylindrical radially expandable stent having a body, two open ends and a longitudinal axis therebetween, said body comprising a plurality of interconnected struts; and
 - 10 b. a graft member attached to said body of said stent, said graft member having a plurality of substantially longitudinally directed pleats disposed thereon.
2. The stent graft of claim 1 wherein said graft member is attached to an exterior surface of said stent.
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3. The stent graft of claim 1 wherein said graft member is attached to said stent by a staple.
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4. The stent graft of claim 1 wherein said graft member is selected from a group of materials comprising: Dacron, Teflon, woven polyester, and polyurethane.
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5. The stent graft of claim 1 wherein said stent is a self expanding stent.
6. The stent graft of claim 5 wherein said stent is made from a superelastic alloy of nickel titanium.

7. A stent graft for insertion into a body vessel of a patient, said stent graft comprising:

- 5 a. a hollow substantially cylindrical radially expandable stent having a body, two open ends and a longitudinal axis therebetween, said body comprising a plurality of interconnected struts; and
- 10 b. a graft member attached to said body of said stent, said graft member having a plurality of substantially longitudinally directed pleats disposed thereon and a plurality of radially oriented pleat interruptions disposed thereon.
- 15 8. The stent graft of claim 7 wherein said graft member is attached to an exterior surface of said stent.
- 20 9. The stent graft of claim 7 wherein said graft member is attached to said stent by a staple.
- 25 10. The stent graft of claim 7 wherein said graft member is selected from a group of materials comprising: Dacron, Teflon, woven polyester, and polyurethane.
11. The stent graft of claim 7 wherein said stent is a self expanding stent.
12. The stent graft of claim 11 wherein said stent is made from a superelastic alloy of nickel titanium.
- 25 13. The stent graft of claim 7 wherein said pleat interruptions comprise radial pleats.